

ABSTRACT

5 A method and apparatus for detecting spectral properties of a sample are disclosed. Electromagnetic radiation in the Terahertz range emitted from a first laser source is modulated and combined with electromagnetic radiation emitted from a second laser source. The frequency spectrum of the combined signal comprises sidebands which can be tuned to resonate with the frequency spectrum of the sample. Tuning of the sidebands is obtained by tuning the first
10 laser source, the second laser source, or the modulation frequency.